

## CLAIMS

1. A colour active matrix electroluminescent display device comprising a row and column array of display pixels (1), each pixel comprising  
5 an electroluminescent display element (2) and a drive transistor (22) for driving a current through the display element, the drive transistor and the display element being connected in series between a power line (26) for supplying or drawing a controllable current to or from the display element and a common potential line (30), wherein each row of display pixels (1) comprises different  
10 colour display pixels for producing different colour light outputs, wherein the display pixels of each colour in a row are associated with a respective and separate power line (26', 26'', 26'''), and wherein the power supply to each power line is individually switchable (40, 45, 48) so as to control the duty cycle of the associated display pixels.

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2. A display device according to Claim 1, wherein the power lines (26', 26'', 26''') associated with the rows of pixels are connected to a power supply (40) through a switching arrangement (45) at one end of the rows.

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3. A display device according to Claim 2, wherein the power lines associated with a row of pixels are connected to at least one power supply rail through respective switches (36, 37, 38) of the switching arrangement (45).

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4. A display device according to Claim 3, wherein the number of power supply rails corresponds to the number of power lines associated with a row of pixels and the power supply rails are shared by all the rows of pixels.

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5. A display device according to Claim 3 or Claim 4, wherein in each frame period ( $T_f$ ) each row of pixels is arranged to be addressed in sequence in a respective row address period ( $T_r$ ) so as to store a drive signal for controlling the operation of the drive transistor (22) of the pixels.

6. A display device according to Claim 5, wherein the switching arrangement (45) is operable to connect each of the power lines associated with a row of pixels to the power supply (40) for a predetermined period following addressing which determines the duty cycle of the display pixels associated with the power line, the power lines of each row of pixels being  
5 switched in similar manner in sequence.

7. A display device according to Claim 6, wherein the power lines of a row are connected to the power supply (40) for a predetermined period that  
10 immediately follows the row address period ( $T_r$ ).

8. A display device according to any one of Claims 5, 6 and 7, wherein each pixel includes a storage capacitor (24) for storing a gate voltage of the drive transistor (22) and an address transistor (16) for switching a data  
15 voltage to the gate of the drive transistor during the row address period, and wherein the switching arrangement (45) is operable to disconnect the power lines of a row of pixels from the power supply during the row address period.

9. A display device according to any one of Claims 5, 6 or 7,  
20 wherein the pixels each include a current sampling circuit for sampling a drive current during the row address period and a storage capacitor for storing a gate – source voltage for the drive transistor corresponding to the sampled drive circuit and wherein the switching arrangement is operable to connect the power lines associated with a row of pixels to the power supply during the row  
25 address period.

10. A display device according to any one of Claims 2 to 7 wherein the switching arrangement is fabricated on a substrate of the device carrying the display pixels and power lines.

11. A display device according to any one of the preceding claims, wherein each row of display pixels comprises red, green, and blue pixels, the different colour pixels being connected to respective power lines.